

Appendix D Examples of Drilling Logs

D-1. General

This appendix contains seven examples of drilling logs, five for overburden drilling, and two for rock coring. The appendix also contains examples of logs generated in the boring log data management program (BLDM) (Nash 1993). The examples are not meant to cover all possible subsurface conditions which may be encountered during field investigation but are presented to give direction to the minimum acceptable input to completing drilling logs for the most common drilling activities.

D-2. Preparation of Drilling Logs

Drilling logs should be made of each boring. A similar log will be prepared for each excavation that is constructed for the purpose of characterizing subsurface materials and geologic conditions. The only approved drilling log form for borings is ENG FORM 1836 (March 1971). This form may be used as a continuation sheet or, at the option of the user, ENG FORM 1836-A (June 1967) may be used. The PC-based, menu-driven BLDM provides a means to enter boring information directly into a computer. The BLDM can be used in the field with a laptop computer. BLDM data can be exported to the Intergraph Insight® program in which it can be printed in the ENG FORM 1836 format.

a. Scale. A scale of 1 cm = 0.25 m (1 in. = 2 ft) or larger should be used. A smaller scale may be used where, for example, the boring is advanced without sampling or logging, the upper portion of the log would represent water, or the boring was made to identify some geologic horizon such as top of rock. Other similar exceptions would be allowable.

b. Heading. All logs will have the pertinent division, installation, location, hole number, project identification, elevation, and page number entered on all log sheets. Items 1 through 19 on ENG FORM 1836 should be completed to the fullest extent possible as indicated in the seven examples. Boring numbers will be consecutive for each project. The boring numbers will be preceded by letter symbols which will identify the method of drilling. These letters are as follows:

A - Auger (Hand or Power)

C - Core

D - Drive

P - Probe

U - Undisturbed (Hydraulic or Rotary)

Additional letters and numbers for boring identification may be used at the user's discretion. Inclusion of the graphic soil symbol in column c is optional.

c. Examples. The drilling log examples of ENG FORM 1836, Figures D-1 through D-7, are described as follows:

Figure D-1: Overburden, disturbed, standard penetration test, and auger.

Figure D-2: Overburden, disturbed, drive.

Figure D-3: Overburden, disturbed, auger.

Figure D-4: Overburden, undisturbed, Denison.

Figure D-5: Overburden, undisturbed, Shelby, and auger.

Figure D-6: Rock, disturbed, SPT, and core.

Figure D-7: Rock, core.

Figure D-8: Foundation boring in which geotechnical data were entered into the BLDM, exported to Intergraph Insight®, and printed in the ENG FORM 1836 format.

DRILLING LOG		DIVISION		INSTALLATION		SHEET	
PROJECT <i>Raymond AFB, S.C. Airmens Dorm</i>		<i>SAD</i>		<i>SAS</i>		<i>1</i> OF <i>2</i> SHEETS	
2. LOCATION (Coordinates or Station) <i>See Remarks</i>		10. SIZE AND TYPE OF BIT <i>1 3/4" I.D. Split spoon</i>		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <i>MSL (NVGD)</i>		12. MANUFACTURER'S DESIGNATION OF DRILL <i>Falling 3/4</i>	
3. DRILLING AGENCY <i>SAS</i>		4. HOLE NO. (As shown on drawing title and file number) <i>AD-6</i>		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN <i>26</i>		14. TOTAL NUMBER CORE BOXES <i>---</i>	
5. NAME OF DRILLER <i>S. Long</i>		6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER <i>17.5</i>		16. DATE HOLE STARTED <i>3 Apr. 81</i> COMPLETED <i>4 Apr. 81</i>	
7. THICKNESS OF OVERBURDEN <i>30.0</i>		8. DEPTH DRILLED INTO ROCK <i>0</i>		17. ELEVATION TOP OF HOLE <i>25.5</i>		18. TOTAL CORE RECOVERY FOR BORING <i>N/A</i> %	
9. TOTAL DEPTH OF HOLE <i>30.0</i>		19. SIGNATURE OF INSPECTOR <i>Jimmy Watson</i>					

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	Blow/FT h
23.0	2		(SM) Brown, Silty SAND Roots In Top 6"		NS	NS = No Sample	1
					1		2
19.9	4		(SP-SM) Light Brown, Poorly Graded, Silty SAND, Medium To Fine, Traces Of Shell, Moist.		NS	<p>LOCATION PLAN</p>	3
					2		4
					3		5
					4		6
15.5	6		(SP) Light Brown, Poorly Graded SAND, Fine w/ Traces Of Shell.		NS	<p>Encountered Water During Drilling With 5" Auger - Mixed Mud At 8' & Cleaned Boring With 4" Rock Bit</p>	7
					5		8
14.5	8		Light Gray		NS		9
					6		10
12.5	10		(OL) Dark Gray To Black, Organic SILT, Trace Sand, Strong Odor.		NS		11
					7		12
11.1	12		(OH) Black, Organic SILT, Lenses Of Clay, Strong Odor, Peaty.		NS		13
					8		14
7.0	14		(SM) Dark Gray, Silty SAND, Medium To Fine.		NS		15
					9		16
	16		(SP) Light Brown, Poorly Graded SAND, Fine.		NS		17
					10		18
	18				NS		19
					11		20
	20		(SP) Light Gray, Poorly Graded SAND, Medium To Coarse.		NS		21
					12		22
					13		23
					14		24
					15		25
					16		26
					17		27
					18		28
					19		29
					20		30

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PROJECT *Raymond AFB - Airmens Dorm* HOLE NO. *AD-6*

Figure D-1. Example of Form 1836 for overburden, disturbed, SPT, and auger data (Continued)

DRILLING LOG		DIVISION	INSTALLATION	SHEET <u>2</u> OF <u>2</u> SHEETS		
1. PROJECT <i>Raymond AFB, Airmens Dorm</i>						
2. LOCATION (Coordinates or Station)						
3. DRILLING AGENCY						
4. HOLE NO. (As shown on drawing title and file number) <i>AD-6</i>						
5. NAME OF DRILLER						
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.						
7. THICKNESS OF OVERBURDEN						
8. DEPTH DRILLED INTO ROCK						
9. TOTAL DEPTH OF HOLE						
10. SIZE AND TYPE OF BIT						
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)						
12. MANUFACTURER'S DESIGNATION OF DRILL						
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN						
14. TOTAL NUMBER CORE BOXES						
15. ELEVATION GROUND WATER						
16. DATE HOLE STARTED _____ COMPLETED _____						
17. ELEVATION TOP OF HOLE <i>25.5</i>						
18. TOTAL CORE RECOVERY FOR BORING %						
19. SIGNATURE OF INSPECTOR <i>Cindy Watson</i>						
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	Box-on-SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			(SP) Light Gray, Poorly Graded SAND, Medium To Coarse.		19	15
					NS	19
					20	6
	22				NS	20
					21	25
2.0					NS	10
	24		Gravelly		22	20
1.0					NS	25
			(CL) Brownish Gray, Sandy CLAY, Stiff To Hard, Shelly, Moist.		23	11
	26				NS	15
					24	30
	28				NS	10
					25	18
	30				NS	32
-4.5					26	11
			Bottom Of Boring			15
						26
						8
						21
						50

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PROJECT *Raymond AFB, Airmens Dorm* HOLE NO. *AD-6*

Figure D-1. (Concluded)

DRILLING LOG		DIVISION <i>Missouri River</i>		INSTALLATION <i>Kansas City</i>		SHEET <i>1</i> OF <i>5</i> SHEETS	
1. PROJECT <i>Grove Dam</i>				10. SIZE AND TYPE OF BIT			
2. LOCATION (Coordinates or Station) <i>42+00 on E</i>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <i>NGVD</i>			
3. DRILLING AGENCY <i>Kansas City Dist.</i>				12. MANUFACTURER'S DESIGNATION OF DRILL <i>Walker Neer</i>			
4. HOLE NO. (As shown on drawing title and file number) <i>D-18</i>				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED <i>48 Jars</i>	
5. NAME OF DRILLER <i>C. Brown</i>				14. TOTAL NUMBER CORE BOXES		UNDISTURBED	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER <i>698.0</i>		16. DATE HOLE STARTED <i>6 Jan 78</i> COMPLETED <i>12 Jan 78</i>	
7. THICKNESS OF OVERBURDEN <i>95.0</i>				17. ELEVATION TOP OF HOLE <i>715.0</i>		18. TOTAL CORE RECOVERY FOR BORING <i>N/A</i> %	
8. DEPTH DRILLED INTO ROCK <i>0</i>				19. SIGNATURE OF INSPECTOR <i>John Doe</i>			
9. TOTAL DEPTH OF HOLE <i>95.0 (EI 120.0)</i>							
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVER- ERY e	BOX-OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
<i>714.0</i>			<i>Asphalt and Base Course</i>		<i>1</i>	<i>Rec 2.0</i> <i>15 Blows</i>	
	<i>2</i>		<i>(CL) Tan, Lean CLAY, Embankment Fill</i>		<i>2</i>	<i>Rec 2.0</i> <i>16 Blows</i>	
	<i>4</i>				<i>3</i>	<i>Rec 2.0</i> <i>14 Blows</i>	
	<i>6</i>				<i>4</i>	<i>Rec 2.0</i> <i>18 Blows</i>	
	<i>8</i>				<i>5</i>	<i>Rec 2.0</i> <i>20 Blows</i>	
	<i>10</i>				<i>6</i>	<i>Rec 1.9</i> <i>Loss 0.1</i> <i>14 Blows</i>	
	<i>12</i>				<i>7</i>	<i>Rec 2.0</i> <i>18 Blows</i>	
<i>701.0</i>	<i>14</i>		<i>Slightly Sandy</i>		<i>8</i>	<i>Rec 2.0</i> <i>Ream to 16.0'</i> <i>22 Blows</i>	
	<i>16</i>				<i>9</i>	<i>Rec 1.9</i> <i>Loss 0.1</i> <i>21 Blows</i>	
<i>698.0 ±</i> <i>12 Jan 78</i>	<i>18</i>		<i>Static Water Level After Completion Of Boring.</i>		<i>10</i>	<i>Rec 2.0</i> <i>23 Blows</i>	
	<i>20</i>						

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PROJECT _____ HOLE NO. *D-18*

Figure D-2. Example of Form 1836 for overburden, disturbed, and drive data

DRILLING LOG			DIVISION	INSTALLATION	Hole No.	SHEET
			SWD	SWT	A-30	1
1. PROJECT			10. SIZE AND TYPE OF BIT			
SR 9 Road Relocation Eutaw Lake			4 in. Square Auger			
2. LOCATION (Coordinates or Station)			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
Station 4+50, 50' Rt.			NGVD			
3. DRILLING AGENCY			12. MANUFACTURER'S DESIGNATION OF DRILL			
Tulsa Dist.			CME-1200			
4. HOLE NO. (As shown on drawing title and file number)			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		14. TOTAL NUMBER CORE BOXES	
A-30			DISTURBED		UNDISTURBED	
5. NAME OF DRILLER			2		-	
A. Jones			15. ELEVATION GROUND WATER		16. DATE HOLE	
			Not Encountered		STARTED COMPLETED	
6. DIRECTION OF HOLE			8-29-82		8-29-82	
<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			17. ELEVATION TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING	
7. THICKNESS OF OVERBURDEN			816.2		-	
8. DEPTH DRILLED INTO ROCK			19. SIGNATURE OF INSPECTOR		%	
8.2 (El 808.0)			Jane Smith			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	1		(CL) Brown, Sandy Lean CLAY, Moist		Jar 1	Drilled With 4 in. Square Auger. No Free Water Encountered. Refusal to Auger At 8.2', Hydraulic Pressure 100 PSI With No Penetration For 2 Min. At Refusal. Drilled 0-8' In 4 Min. Drill rate 2'/Min. Drill Action Smooth At 100 RPM
	2					
813.2	3		(ML) Tan, Clayey, SILT, Slightly Plastic			
	4					
	5		Micaceous, Slightly Damp		Jar 2	
	6					
	7					
808.0	8		Refusal To Auger @ 8.2'			
	9					

Figure D-3. Example of Form 1836 for overburden, disturbed, and auger data

DRILLING LOG		DIVISION SAD		INSTALLATION SAS		SHEET / OF / SHEETS	
1. PROJECT Richard B. Russell Dam				10. SIZE AND TYPE OF BIT 6 in. Denison			
2. LOCATION (Coordinates or Station) X: 312,457 Y: 123,456				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD			
3. DRILLING AGENCY SAS				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 1500			
4. HOLE NO. (As shown on drawing title and file number) U-1				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED	UNDISTURBED
						-	17
5. NAME OF DRILLER J. Smith				14. TOTAL NUMBER CORE BOXES -			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER See Remarks			
7. THICKNESS OF OVERBURDEN 36.2				16. DATE HOLE		STARTED	COMPLETED
						3-16-75	3-16-75
8. DEPTH DRILLED INTO ROCK 0				17. ELEVATION TOP OF HOLE 376.5			
9. TOTAL DEPTH OF HOLE 36.2 (EI 340.3)				18. TOTAL CORE RECOVERY FOR BORING N/A %			
				19. SIGNATURE OF INSPECTOR Johnny Jones			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REGION - SAW	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
a	b	c	d	e	f	g	
	5		(ML) Reddish Brown, Slightly Clayey, SILT.	HAND PENE TSF		Fish Tailed To 2'. Drilled With 6 in. Denison Barrel With Inner Barrel Protruding 1 in. 100% Recovery Except As Noted. Hand Penitrometer Made On Bottom Of Each Sample. No Changes In Drill Mud To Indicate Free Water.	
	10			0.6	1	#6 Ran 2.0 Rec 1.6	
	15			0.5	2		
	20			0.5	3		
	25			0.6	4	#10 Ran 2.0 Rec 1.8	
	30			0.4	5	#11 Ran 2.0 Rec 1.6	
	35		Red, Slightly Sandy	0.5	6		
				0.6	7		
				0.6	8		
				0.7	9		
				0.6	10	#14 Ran 2.0 Rec 1.2	
				0.6	11		
				0.8	12		
				0.9	13		
				0.8	14		
				0.9	15		
				1.0	16		
340.3	35		Bottom Of Hole	0.9	17	Refusal At 36.2' No Recovery 36.0'-36.2'	

Figure D-4. Example of Form 1836 for overburden, undisturbed, and Denison data

DRILLING LOG		DIVISION	INSTALLATION	Hole No. <i>AU-3</i>		
1. PROJECT <i>Alum Creek Dam, Ohio</i>		<i>ORD</i>	<i>Huntington</i>	SHEET <i>1</i> OF <i>1</i> SHEETS		
2. LOCATION (Coordinates or Station) <i>Sta. 2+50.0 5 d/s of E</i>			10. SIZE AND TYPE OF BIT <i>6 in. Auger & 5 in. Shelby</i>			
3. DRILLING AGENCY <i>ORH</i>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <i>NGVD</i>			
4. HOLE NO. (As shown on drawing title and file number) <i>AU-3</i>			12. MANUFACTURER'S DESIGNATION OF DRILL <i>Falling 1500</i>			
5. NAME OF DRILLER <i>C. Black</i>			13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <i>—</i> UNDISTURBED <i>3</i>			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			14. TOTAL NUMBER CORE BOXES <i>—</i>			
7. THICKNESS OF OVERBURDEN <i>—</i>			15. ELEVATION GROUND WATER <i>Not Encountered</i>			
8. DEPTH DRILLED INTO ROCK <i>—</i>			16. DATE HOLE STARTED <i>6 May 1981</i> COMPLETED <i>6 May 1981</i>			
9. TOTAL DEPTH OF HOLE <i>22.0 (El. 930.4)</i>			17. ELEVATION TOP OF HOLE <i>952.4</i>			
			18. TOTAL CORE RECOVERY FOR BORING <i>N/A</i> %			
			19. SIGNATURE OF INSPECTOR <i>William Boyd</i>			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	5			Hand Penet.		Augered w/ 6 in. Helical Auger To 6, 10, And 20 Feet. Where 5 in. Shelby Tubes Were Pushed 24 in. Hand Penetrometer Taken On Lower End Of Each Sample Push 1 Ran 24" Rec 24" Push 2 Ran 24" Rec 24" Push 3 Ran 24" Rec 24"
	10			1.0 TSF	U-1	
	15			1.6 TSF	U-2	
	20			2.0 TSF	U-3	
930.4			Bottom Of Boring			
			Note. Description Of Materials Should Be Entered Into Column d Only After Completion Of Laboratory Testing.			

Figure D-5. Example of Form 1836 for overburden, undisturbed, Shelby, and auger data

DRILLING LOG		DIVISION <i>South Pacific</i>		INSTALLATION <i>Los Angeles</i>		Hole No. <i>DC-4</i>	
1. PROJECT <i>PRADO DAM, CA.</i>		10. SIZE AND TYPE OF BIT <i>Diamond NWM</i>		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <i>MSL</i>		SHEET <i>1</i> OF <i>42</i> SHEETS	
2. LOCATION (Coordinates of Station) <i>See Remarks</i>		12. MANUFACTURER'S DESIGNATION OF DRILL <i>Sullivan - 180</i>		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN <i>4</i>		DISTURBED <input checked="" type="checkbox"/> UNDISTURBED <input type="checkbox"/>	
3. DRILLING AGENCY <i>Mott Drilling Co.</i>		14. TOTAL NUMBER CORE BOXES <i>14</i>		15. ELEVATION GROUND WATER <i>See Remarks</i>		16. DATE HOLE <i>2/18/79</i> STARTED <i>3/18/79</i> COMPLETED	
4. HOLE NO. (As shown on drawing title and file number) <i>DC-4</i>		17. ELEVATION TOP OF HOLE <i>575.0</i>		18. TOTAL CORE RECOVERY FOR BORING <i>99.4/99.5 %</i>		19. SIGNATURE OF INSPECTOR <i>Jim Jones</i>	
5. NAME OF DRILLER <i>Horton</i>		7. THICKNESS OF OVERBURDEN <i>5.0 (575.0)</i>		8. DEPTH DRILLED INTO ROCK <i>100.0</i>		9. TOTAL DEPTH OF HOLE <i>475.0</i>	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
573.5	1		(CL) Brown, Sandy CLAY, Roots In Top 6", Moist.		1	Brown's Store Hwy 36 Apex 3500' C-4 Blews/Ft	
	2		(SC) Brown, Clayey, SAND, Fine To Medium, Moist		2	Drl w/ 1.1' x 4 1/2" Rollar Rock Bit w/ Water Begin 1300 19 End 1350	
	3				3	Ran 5.0' Set 5.3' of 4" Black Iron Pipe 1 w/ Saw Tooth End To 5.0' 22	
570.5	4		Rock Frags TR		4	Ref At 5.0' 50	
570.0	5						
	6		SANDSTONE - Mss Bdd, SI, Mic, Med Hd To Hd, F To Med Gra, It Gr To LT Br, Occ Bk Sh Pths, Num Hem Pths Upper 3' Of Core	Rec 84%	Box 1	Drl w/ 11.7 (10.3) N.X.M. Bit # 1234 (V. Good) Shell # 5678 (New) Pull 1	
	7		So To Med Hd, V.F. 0.6 LC		10	Drl Tools 21.7' WL 7.6' @ 1640 Began 1615 End 1635	
	8		So, St Red	RQD 79%	Boxes	Drl Time 20 Min Ran 5.2 Rec 3.8 Loss 1.4 U.L. 0.6 Water Pressure 50 psi Drl Action - Smooth 100% DWR - 100% CD 9.4'	
	9		Op, 1/4 Jt, 55°			Tape RQD 3.5' = 0.79%	
	10						

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PROJECT *Prado Dam, Ca.* HOLE NO. *DC-4*

Figure D-6. Example of Form 1836 for bedrock, disturbed, SPT, and core data (Continued)

DRILLING LOG (Cont Sheet)			ELEVATION TOP OF HOLE 575.0		Hole No. DC-4	
PROJECT PRADO DAM, CA.			INSTALLATION Los Angeles		SHEET 2 OF 42 SHEETS	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SANDSTONE (Cond. As Above)			10.2
	11					Pull 2
						Drill Tools 31.7'
						WL 8.2' @ 1800
						Begin 1645
						End 1745
						Drill Time 1 hr.
	12		Op, 1/2 Jt, 15° St. Red	Rec 93%	Box 1	Ran 10.0'
						Rec 10.0'
						Loss 0.0'
						U.L. 0.8'
	13		Cav. Op, 0.6' U.L. No DWL	RQD 93%	29 Boxes	Water Pressure 50psi
						Drl Action - Smooth
						100% DWR - br
	14					RQD 10.0' = 93% 10.8
						Rod Drop 13.0 To 13.6
						No DWL, No Change
						In Color of DWR
	15					
	16		Op, Hor. Jt., Smooth			
	17					17.0
	18					Box 2
						Of 10
						Boxes
	19		0.2' U.L., Spins Prob. Ground During Drilling			
	20					CD TAPE 20.2 20.2
	21		Num. Fracs. St. Red 0.3' C.L.			Pull 3 (Cond. on Next Page)
	22					

Figure D-6. (Concluded)

Figure D-7. Example of Form 1836 for bedrock and core data (Sheet 1 of 3)

DRILLING LOG (Cont Sheet)			ELEVATION TOP OF HOLE 625.5		Hole No. C-18	
PROJECT Taylorsville Dam			INSTALLATION Louisville		SHEET 2 OF 3 SHEETS	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		LIMESTONE (Cont.)			Pull 3 9.5 - 14.0
	11		Numerous Vugs	Rec 100%	Box 2 Of 4 Boxes	Ran 4.5 Rec 4.9 Gain 0.4 Drl. Action Smooth Water Ret. 100% Gray Drl. Time 62 min. Hyd. Press. 150 psi
	12		Horizontal Open Joints	RQD 71%		RQD $\frac{3'6"}{4'11"} = 71\%$
	13		Core Badly Broken Numerous Closely Spaced High Angle And Horizontal Joints			
	14		Low Angle (10°) Irregular Joint, Tight 45° Joint, Tight 45° Joint, Slightly Open			CD 14.0 14.0
	15			Rec 100%		Pull 4 14.0 - 19.0 Ran 5.0 Rec 4.5 Loss 0.5 U.L. 0.0 Drl. Action Smooth Water Ret. 100% Gray Drl. Time 75 min. Hyd. Press. 150 psi
	16			RQD 85%		RQD $\frac{3'9"}{4'5"} = 85\%$
	17					
	18		Irregular, Horizontal Joint, Tight		18.0	CD TAPE 18.5
306.4	19		100% Drill Water Loss		Box 3 Of 4 Boxes	19.0
	20		Open Cavity, Tools Dropped Freely	Rec 61%		Pull 5 19.0 - 25.5 Ran 6.5 Rec 4.0 Loss 2.5 U.L. 2.6 Drl. Action - Rough 100% W.L. At 19.1 Drl. Time 40 min. Hyd. Press. 150 psi
304.3	21		Stained Brown	RQD 53%		
	22					

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Figure D-7. (Sheet 2 of 3)

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE 625.5		Hole No. C-18		
PROJECT Taylorsville Dam		INSTALLATION Louisville		SHEET 3 OF 3 SHEETS		
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	22		LIMESTONE (Cont.)			Pull 5 (Cont.)
	23		Horizontal Open Joints Stained Brown	Rec 61%	Box 3	RQD $\frac{3'6"}{6'7"} = 53\%$
	24			RQD 53%	4 Boxes (Cont.)	W.L. In Hole After Run 19.0'
	25		Fresh, Irregular Break Near Horizontal			CD Tape 25.1
	26			Rec 100%		Pull 6 25.5-29.0
	27		Fresh Break Along Silty Parting	RQD 100%	27.0	Ran 3.5 Rec 3.9 Gain 0.4 Drl. Action Rough No D.W. Return Hyd. Press. 150 psi Drl Time 40 min. W.L. -19.0'
	28				Box 4	RQD $\frac{3'11"}{3'11"} = 100\%$
	29		45° Joint, Tight, Smooth		4 Boxes	CD 29.0
	30			Rec 100%		Pull 7 29.0-33.5
	31			RQD 100%		Ran 4.5 Rec 4.5 Loss 0.0 Drl. Action Rough No D.W. Return Hyd. Press. 150 psi Drl. Time 70 min. W.L. 19.0'
	32		Horizontal Fracture Irregular, Fr. sh			RQD $\frac{4'6"}{4'6"} = 100\%$
	33					Water Level 19.0' After 24 Hr.
592.0			Bottom Of Hole			Tape CD 33.5

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Taylorsville Dam

HOLE NO.
C-18

Figure D-7. (Sheet 3 of 3)

DRILLING LOG		DIVISION		INSTALLATION		SHEET 1 OF 2 SHEETS	
1. PROJECT Waterways Experiment Station				10. SIZE AND TYPE OF BIT			
2. LOCATION (Coordinates or Station) 650287.0000 337262.0000				11. DATUM FOR ELEVATION SHOWN <i>WBM or MSL</i>			
3. DRILLING AGENCY				12. MANUFACTURER'S DESIGNATION OF DRILL			
4. HOLE NO. (As shown on drawing title and file number) 3396-U-5				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN			
5. NAME OF DRILLER				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN				16. DATE HOLE STARTED 8/25/1975 COMPLETED 8/25/1975			
8. DEPTH DRILLED INTO ROCK				17. ELEVATION TOP OF HOLE 193.40			
9. TOTAL DEPTH OF HOLE 146.10				18. TOTAL CORE RECOVERY FOR BORING %			
				19. SIGNATURE OF INSPECTOR			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	5		Lean, sandy, silty clay, med plasticity CL				
	10						
	15		Silt, very fine sand, clayey fine sand ML				
	20						
	25						
	30		No Data ND				
	35		Silt, very fine sand, clayey fine sand ML				
	40						
	45		Lean, sandy, silty clay, med plasticity CL				

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PROJECT _____ HOLE NO. _____

Figure D-8. Foundation boring in which geotechnical data were entered into the BLDM, exported to Intergraph Insight, and printed in the ENG FORM 1836 format (Continued)

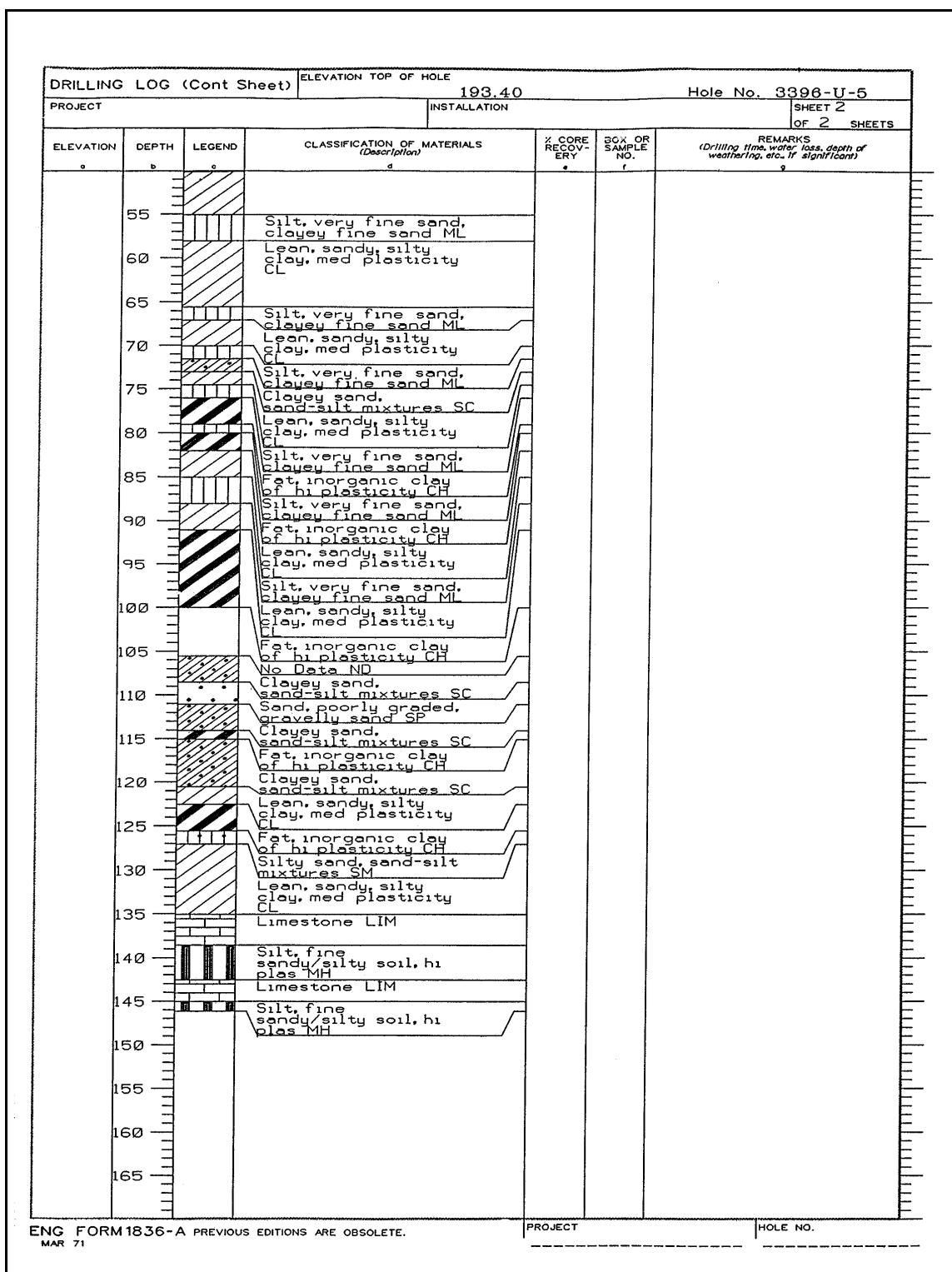


Figure D-8. (Concluded)